

CLAIMS

1. A microplate comprising a plurality of wells for storing samples to be observed, characterized in that wells are formed by covering openings of the through-holes with a light transmissible plate having a light transmissible property on one side, the through-holes being formed on a resin plate formed by covering a metal plate with plastic resin and extending through the resin plate including the metal plate, and in that an additional through-hole is formed on the surface of the metal plate within the well-formed range but at the positions where the wells are not formed.
- 15 2. A microplate according to claim 1, characterized in that the metal plate is an aluminum plate.
3. A microplate according to claim 1, characterized in that the metal plate is duralumin alloy.
- 20 4. A microplate according to claim 1, characterized in that the resin plate is formed by injecting and molding plastic resin from one side of the metal plate, and in that the additional through-hole may be provided at the position nearest to the position of injection gate of

plastic resin when the resin plate is formed.

5. A microplate according to claim 1, characterized in that the wells are arranged at regular intervals in
5 the vertical and lateral directions into a rectangular shape, and the additional through-hole is positioned at an equal distance from four wells provided in the vicinity of the additional through-hole.

10 6. A microplate according to claim 1, characterized in that a plural number of the additional through-holes is provided.

15 7. A microplate according to claim 6, characterized in that the resin plate is formed by injecting and molding plastic resin from one side of the metal plate, and the sizes of the additional through-holes other than those formed at the position nearest to the position of injection gate of plastic resin when forming the resin 20 plate is larger than the other additional through-holes.

8. A microplate according to claim 6, characterized in that the resin plate is formed by injecting and molding plastic resin from one side of the metal plate, and in
25 that the sizes of the additional through-holes provided

at the positions other than the nearest position to the position of injection gate of plastic resin when forming the resin plate increases with increase in distance from the position of injection gate.

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9. A microplate according to claim 6, characterized in that the resin plate is formed by injecting and molding plastic resin from one side of the metal plate,
in that the wells are arranged at regular intervals
10 in the vertical and lateral directions into a rectangular shape, and
in that the additional through-holes provided at the positions other than the nearest position to the position of injection gate of plastic resin when forming
15 the resin plate are displaced from the positions at equal distance from the four wells provided in the vicinity of the additional through-holes, and the amount of displacement of the positions is based on the distance from the position of injection gate.

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10. A microplate according to Claim 1, characterized in that the additional through-hole has a round shape.
11. A microplate according to Claim 1, characterized
25 in that the ends of the additional through-holes are

chamfered.

12. A microplate comprising a plurality of wells for storing samples to be observed, characterized in that
5 wells are formed by covering openings of the through-holes with a light transmissible plate having a light transmissible property on one side, the through-holes being formed on a resin plate formed by covering a metal plate with plastic resin and extending
10 through the resin plate including the metal plate, and in that at least one of the through-holes provided on the metal plate passes through the plurality of the wells.

13. A microplate according to claim 12, characterized
15 in that the through-hole provided on the surface of the metal plate, which passes through the plurality of the wells, has a rectangular shape.

14. A microplate according to Claim 12, characterized
20 in that the metal plate is formed of duralumin alloy.

15. A microplate according to Claim 12, characterized in that the resin plate is formed by injecting and molding plastic resin from one side of the metal plate, and the
25 sizes of the through-holes, which are formed on the

surface of the metal plate so as to pass through the plurality of the wells, increase with increase in distance from the position of injection gate.

5 16. A method of manufacturing a microplate comprising a plurality of wells for storing samples to be observed, comprising the steps of:

disposing a metal plate formed with through-holes at the positions where the wells are formed and at the
10 positions different from the positions where the wells are formed in the forming die;

injecting plastic resin from a position closest to one of the through-holes which are provided at a position different from the positions where the wells
15 are formed on the metal plate disposed in the forming die to form the metal plate into a resin plate covered with the aforementioned plastic resin and formed with the through-holes at the positions where the wells are to be formed; and

20 adhering a light transmissible plate having a light transmissible property to one side of the resin plate to cover the through-holes formed on the resin plate on one side, thereby forming the wells.

25 17. A method of manufacturing a microplate comprising

a plurality of wells for storing samples to be observed,
comprising the steps of:

disposing a metal plate formed with through-holes
in a forming die;

- 5 injecting and molding plastic resin in the forming die
to form the metal plate into a resin plate covered with
the aforementioned plastic resin and formed with the
through-holes, the meal plate comprising at least one
through-hole passing through a plural number of
10 through-holes provided on the resin plate;

adhering a light transmissible plate having a light
transmissible property to one side of the resin plate
to cover the through-holes formed on the resin plate
on one side, thereby forming the wells.